

Claims

1. A flow control valve including a body member having a bore defining a fluid flow passageway, a resiliently-biassed piston member mounted in said passageway for movement relative to the body member in response to the differential fluid pressure across the valve, said piston member defining an annular throttling orifice between said piston member and said bore, wherein at least a portion of said passageway has a non-uniform cross-section, such that the size of the annular orifice depends on the position of the piston member relative to the body member; characterised in that the piston member has a side wall that defines with the non-uniform portion of the fluid flow passageway an annular fluid flow slot, wherein the length and the cross-sectional area of said annular slot depend on the position of the piston member relative to the body member.
2. A flow control valve according to claim 1, wherein the non-uniform portion of the fluid flow passageway increases in size towards an inlet end of said passageway.
3. A flow control valve according to claim 2, wherein the non-uniform portion of the fluid flow passageway is flared.
4. A flow control valve according to any one of the preceding claims, wherein said piston member includes a piston head, and said throttling aperture is defined between a downstream edge of said piston head and said non-uniform portion of the fluid flow passageway.
5. A flow control valve according to claim 4, wherein the piston head is substantially cylindrical.
6. A flow control valve according to claim 4 or claim 5, wherein the piston member includes a support structure, said support structure being mounted for sliding movement in the bore.
7. A flow control valve according to claim 6, wherein the piston head is connected to the support structure for movement therewith and extends from said support structure towards an inlet end of said valve.

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